



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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January 31, 2001

CERTIFIED RETURN RECEIPT
7000 0520 0021 7582 8524

Don Fullmer
Paradise Management, Inc.
905 North Main
Fillmore, Utah 84631

Re: Initial Review of Amended Notice of Intention to Commence Large Mining Operations, Paradise Management Inc, Koosharem Mine, M/031/002, Piute County, Utah

Dear Mr. Fullmer:

The Division has completed a review of your draft amended Notice of Intention to Commence Large Mining Operations for the Koosharem Mine, located in Piute County, Utah, which was received October 30, 2000. After reviewing the information, the Division has the following comments which will need to be addressed before tentative approval may be granted. The comments are listed below under the applicable Minerals Rule heading. Please format your response in a similar fashion. Please provide a response to this review by March 5, 2001.

The Division will suspend further review of your amended mine plan application until your response to this letter is received. If you have any questions in this regard please contact me, Tony Gallegos, Lynn Kunzler, Tom Munson or Doug Jensen of the Minerals Staff. If you wish to arrange a meeting to sit down and discuss this review, please contact us at your earliest convenience. Thank you for your cooperation in completing this permitting action.

Sincerely,

D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb

Attachment: Review

cc: Stan Perks, BLM
Steve Winslow, USFS

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REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

**Paradise Management Inc.
Koosharem Mine**

M/031/002

R647-4-104 - Filing Requirements and Review Procedures

A review of the file records for this mine indicates that the originally proposed large mine permit application never received final Division approval. Only the *reclamation portion* of the original notice was approved in 1990 for this mine. Our approval addressed the 6.5 acres of surface disturbance that existed at that time. Interstate Brick Company was the operator and had expressed their intent to curtail any expansion of the mining operations, committing to stay within the existing 6.5 acres of disturbance. Consequently, some of the following comments (i.e., operation plans) also reflect that only the reclamation plan for the 6.5 acres ever received Division approval. Once this amended notice is approved, it will cover both a mine development and reclamation plan for the entire site.

R647-4-105 - Maps, Drawings & Photographs

105.2 Surface facilities map

Please show locations of waste dumps; pits; highwalls; and the topsoil, overburden and ore stockpiles on the surface facilities map. (LK)

105.3 Drawings or Cross Sections (slopes, roads, pads, etc.)

Please provide north-south and east-west cross-sections of the proposed affected area, showing the existing surface contour profile, the post-mining surface contour profile, and the post reclamation surface contour profile. These cross-sections need to drawn to scale of 1"=50' for calculation purposes. (DJ)

R647-4-106 - Operation Plan

106.2 Type of operations conducted, mining method, processing etc.

Please provide a narrative of the mining development plan and include a description of the equipment being used. (DJ)

106.3 Estimated acreages disturbed, reclaimed, annually.

The operator has indicated an area of approximately 5 acres for future expansion for the next 5- year period. Will any area(s) be reclaimed during this 5-year period? If so, please identify these areas on a map. (LK)

106.4 Nature of materials mined, waste and estimated tonnages

Please provide an estimate of the amount of soil and overburden that will be generated during the life of the mine. An estimate of the volume of soil and overburden presently stored on the site is also required. (DJ)

106.5 Existing soil types, location, amount

The Division is uncertain how much topsoil is available for salvage. A search of the correspondence files and original mine plan indicates a discrepancy in the depth of topsoil from

1-2 inches to 2-3 feet. The amount of salvageable topsoil will need to be verified by the operator during the next field season. (LK)

106.6 Plan for protecting & redepositing soils

The original plan indicates that topsoil stockpiles will be seeded with a grass cover to protect them from erosion until they are used for reclamation. Attached to this review is a recommended seed mix for stabilizing topsoil stockpiles. If acceptable, please include it in your plan. (LK)

106.7 Existing vegetation - species and amount

We can find no record of a vegetation survey ever being completed for this site. A survey will need to be completed during the next growing season (June-July). This information is required to establish reclamation success standards and to fine-tune the revegetation plan. (LK)

R647-4-107 - Operation Practices

107.1 Public safety & welfare

107.1.12 Disposal of trash, scrap, debris

Please provide a description of how you will dispose of trash and associated mining related debris generated at the site. (DJ)

107.1.14 Posting warning signs

Warning signs should be posted at the entrance of the quarry and other public access points warning of the hazards associated with the site. Due to the relative flatness of the area where the quarry is located, please consider erecting a fence between the forest service road and quarry to help assure ATV users do not have access to the highwall area. (DJ & LK)

107.3 Erosion control & sediment control

From the information in this plan, it is assumed that all surface runoff from the disturbed area drains into the pit and no contaminated runoff leaves the site. If this assumption is incorrect, or if this situation changes, then a sediment and erosion plan will need to be submitted for Division review and approval. Please provide a commitment agreeing to do so. (TM)

107.5 Suitable soils removed & stored

Please refer to comments under 106.5 Existing soil types, location, amount. (LK)

107.6 Concurrent reclamation

Please show on a map, areas that will be reclaimed during the next 5 years. (LK)

R647-4-109 - Impact Assessment

109.1 Impacts to surface & groundwater systems

From information provided in this plan, it is assumed that this operation will have no impacts to surface and ground water. Given the proximity to Lower Box Creek Reservoir, it is

essential that no contaminated runoff leaves the site. Please explain how you will prevent contaminated runoff from leaving the site. (TM)

109.4 Slope stability, erosion control, air quality, safety

Please refer to comment under R647-4-107.1.14 Posting warning signs. (LK)

R647-4-110 - Reclamation Plan

110.1 Concurrent & post mining land use

The original NOI identified the current and post mining land use as wildlife habitat. It is assumed that there is no change in post mining land use due to this amendment. Please confirm this assumption. (LK)

110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed

The original NOI identified that all slopes, highwalls, etc. would be regraded to a slope of 20 degrees or less (approximately a 3h:1v slope). It is assumed that regrading of the site during final reclamation will follow the original NOI. Please advise otherwise, if there is any change in this provision. (LK)

110.3 Description of facilities to be left (post mining use)

All facilities will be removed and/or reclaimed. (LK)

110.5 Revegetation planting program

Past revegetation efforts at the site have resulted in poor vegetation establishment. In reviewing past procedures, it appears that contributing factors to poor vegetation establishment include: several species in the seed mix are not well adapted to the site, lack of topsoil or properly amended substitute soil materials, and excessive slope angles (slopes were not reduced to 3h:1v or less). To remedy these problems, please consider the following:

1. Use the revised attached seed mix for future revegetation efforts. Seeding should be done late fall, just prior to snowfall (please note, the recommended seed mix has been reviewed by the US Forest Service and is acceptable to them for reclamation of the site as well).
2. Apply 5 tons/acre of composted manure to all areas receiving 6 inches or more of topsoil at the time of reclamation, and 10 tons/acre on all areas receiving less than 6 inches of topsoil.
3. Regrade all slopes, highwalls, etc to 3h:1v or flatter slope. Leave the final regraded surface as rough as possible. (LK)

R647-4-111 - Reclamation Practices

111.1 Public safety & welfare

1.12 Disposal of trash & debris

See comments under R647-4-107.1.12. (DJ)

111.2 Reclamation of natural channels

There is no mention of any drainage channels being restored (reconstructed) during reclamation. Please describe the final topography of the pit after any backfilling and regrading. Please describe the configuration of the surface drainage after final reclamation. (TM)

111.3 Erosion & sediment control

Please describe how erosion and sediment will be controlled as part of reclamation. (TM)

111.5 Land capable of post mining land use

Wildlife habitat was a major consideration in developing the attached seed mix. As requested earlier, please indicate whether the attached seed mix is acceptable. (LK)

111.6 All slopes regraded to stable configuration

Assuming the original regrading plan will be followed (i.e. all slopes, highwalls, etc. will be regraded to a slope of 3h:1v or flatter), compliance with this rule is expected. (DJ)

111.7 Highwalls stabilized at 45 degrees or less

That portion of the overburden presently stored at the site that will not be required for establishing a growth medium, should be used as backfill to reduce pit highwalls. (DJ)

111.12 Topsoil redistribution

Before this topic can be evaluated, the Division needs to know the present volume of stockpiled soil material and how much will be salvaged from the expansion area. As stated above, the file contains conflicting soil depth information ranging from an inch or two, to over 2 feet. This information will need to be verified by the operator during the next field season. (LK)

R647-4-112 - Variance

No variances were requested. (DJ)

R647-4-113 - Surety

Before a final surety can be calculated, the Division needs the technical information and plans requested in this review. (DJ)

Forest Service Comments:

The following comment has been received by the Forest Service. Since the Quarry is located on Forest Service lands, you will need to comply with their regulatory requirements as well.

Before the operator will be allowed to expand his operation beyond the presently disturbed area (approximately 11.75 acres), an environmental assessment (EA) will need to be completed. This will include obtaining clearances for threatened and endangered species and potential archeology sites. Field work to complete the EA is scheduled for the 2001 field season.

Recommended Revegetation Species List
for

FINAL RECLAMATION

Paradise Management Inc.
Koosharem Clay Pit
M/031/002

Prepared by DOGM January 11, 2001

<u>Common Name</u>	<u>Species Name</u>	<u>*Rate lbs/ac (PLS)</u>
Thickspike wheatgrass	<u>Agropyron dasystachum</u>	2.0
Bluebunch wheatgrass	<u>Agropyron spicatum</u>	2.0
'Piute' orchard grass	<u>Dactylis glomerata</u>	0.5
Basin Wildrye	<u>Elymus cinereus</u>	2.0
Ladac Alfalfa	<u>Medicago sativa</u>	0.5
Yellow sweetclover	<u>Melilotus officinalis</u>	0.5
Rocky mountain penstemon	<u>Penstemon strictus</u>	0.5
Small burnet	<u>Sanguisorba minor</u>	1.0
Black sagebrush	<u>Artemisia nova</u>	0.1
Mountain big sagebrush	<u>Artemisia tridentata vaseyana</u>	0.1
Serviceberry	<u>Amelanchier alnifolia</u>	1.0
Total		10.2 lbs/ac

*Recommended broadcast seeding rate

Recommended Revegetation Species List
for

TOPSOIL STOCKPILE STABILIZATION

Paradise Management Inc.
Koosharem Clay Pit
M/031/002

<u>Common Name</u>	<u>Species Name</u>	<u>*Rate lbs/ac (PLS)</u>
Thickspike wheatgrass	<u>Agropyron dasystachum</u>	3.0
'Piute' orchard grass	<u>Dactylis glomerata</u>	0.75
Ladac Alfalfa	<u>Medicago sativa</u>	1.0
Yellow sweetclover	<u>Melilotus officinalis</u>	0.5
Small burnet	<u>Sanguisorba minor</u>	1.5
Total		6.75 lbs/ac

*Recommended broadcast seeding rate